

**REMARKS**

Claims 1-28 are pending. By this Amendment, the specification is amended to update the status of patent applications listed therein, claims 6 and 7 are amended, and claim 28 has been added. No new matter is involved. Support for claim 28 is found, for example, on page 10, lines 18-29.

The Office Action alleges that the "information disclosure statement filed 9/4/03 fails to comply with the provisions of 37 CFR §1.97, 1.98 and MPEP §609 because a copy of US Application No. 09/487,587 was not provided." Applicants respectfully traverse this assertion.

Applicants filed an IDS on August 4, 2003 (not on September 4, 2003, as alleged in the Office Action), which listed 28 references, and supplied a copy of each of the 28 listed references. Prima facie proof of this fact is found on the IDS transmittal letter, which clearly states that what was filed was an IDS, a PTO-1449, and 28 references. The USPTO Mail Room, Office of Preliminary Examination (OIPE) stamped this transmittal letter on August 4, 2003. That stamp by OIPE is an acknowledgement that they received all 28 references, and constitutes prima facie proof that all 28 references were filed on that date. Additional proof is provided by the date-stamped PTO mailroom receipt, a copy of which is attached hereto.

Applicants respectfully disagree with the statement in the Office Action that "a copy of US Application No. 09/487,587 was not provided." and submit that this unsupported, conclusionary statement provides no evidence that a copy of US Application No. 09/487,587 was not provided. This completely unsupported statement fails to overcome Applicants' prima facie showing, as evidenced by the attached copy of the OIPE mail Room stamped filing receipt which acknowledges receipt of all 28 cited references.

While Applicants do not dispute that the allegedly non-provided application did not reach the Examiner, the Examiner is not the only member of the USPTO staff who handled the references filed on August 4, 2003, and absent evidence that all of those USPTO personnel who handled the August 4, 2003 IDS, PTO-1449 and cited reference copies, did not lose the copy of the allegedly non-provided '587 application copy, Applicants respectfully submit that they have fully complied with their requirement to submit all 28 references cited in on the PTO-1449 as part of the IDS filed on August 4, 2003.

Under the circumstances, Applicants respectfully submit that the Information Disclosure statement filed on August 4, 2003 fully complies, on a prima facie basis with the requirements of 37 CFR §§1.97, 1.98 and MPEP §609, that this compliance was achieved on August 4, 2003, and request that the next Office Action acknowledge this fact, and provide Applicants with an initialed copy of the PTO-1449 filed on August 4, 2003 that initials all cited references.

In the interest of expediting prosecution of this Application, Applicants are attaching another copy of the '587 application, and a new copy of the PTO-1449, for the Examiner's convenience.

The Office Action objects to the drawings under 37 CFR §1.84(p)(5) because they allegedly do not include a label 260 in Fig. 2. Applicants respectfully traverse this objection because Fig. 2, as filed, does contain label 260. A copy of Fig. 2, which clearly includes the label "260" is enclosed. The label "260" is highlighted for the Examiner's convenience.

The Office Action alleges that "there is a misrepresentation in labeling the decision block, S160 in figure 2, and S155 in the specification when the control has reached a predetermined value." Applicants respectfully traverse this allegation based on the proposed amendment of the specification to indicate that "Otherwise control jumps to step S160." The

Examiner is thanked for pointing out this error, which is clear from a review of Fig. 3. No new matter is involved. Basis for the Amendment is found, for example, in Fig. 3

The Office Action objects to the drawings under 35 USC §1.84(p)(4) because reference characters "R<sub>T</sub>(λ)" and "P" have both been used to designate the output from the color image data source (201) in fig. 2, referring to page 9, lines 25-29 and page 14, lines 1-3. Applicants respectfully traverse this objection.

Fig. 1 clearly shows reference character "R<sub>T</sub>(λ)" used to designate output from the color image data source 101. On page 13, lines 8-12 the specification clearly state the following

The color image data source 201, the link 205, the processing circuit 210, the color controller 220, the color marking device 230, the processing circuit 240, the controller 229, the memory 225, the color marking device 233 and the color sensor 235 correspond to and operate similarly to the same elements discussed above with respect to Fig. 1.

The device and illumination independent color reproduction system 200 shown in Fig. 2 operates as described above with respect to the device and illumination independent color reproduction system 100 shown in Fig. 1.

However, the device and illumination independent color reproduction system 200 shown in Fig. 2 also includes a second memory 250. The second memory 250 includes a feed-forward mapping look-up table that contains at least an image parameter mapping look-up table. The second memory 250 stores image parameters P<sub>I</sub>, which are output from the color image data source 201, the reference parameter vector β<sub>T</sub> which is output from the first processing circuit 210, and the device dependent colors, CMY, which are output from the color controller 220.

This portion of the specification clearly provides basis for reference characters "R<sub>T</sub>(λ)" and "P" both being used to designate the output from the color image data source (201) in fig.

2. In other words, because elements 201, 205, 210, 220, 225, 229, 230, 235 and 240 correspond to, and operate similarly to the same elements discussed with respect to Fig. 1, "R<sub>T</sub>(λ)" is output from color image source 201, and "P" is also output from element 201, as clearly stated in the quoted language, above.

The Office Action asserts that reference character  $\beta_o$  has been used to illustrate both the output from the color controller (220) and the output from the second memory (250) in Fig. 2. The Office Action alleges that this is inconsistent with the disclosure on page 15, line 7, that  $\beta_o$  is used to designate the output vector of the color controller (220). Applicants respectfully traverse this objection.

A review of Fig. 2 reveals that the output of element 220 goes to second memory 250 and that second memory 250 has an output path. It would stand to reason that something stored in memory 250 can be read out of that memory, and if  $\beta_o$  is output from color controller 220 into memory 250, that  $\beta_o$  can be read out of memory 250. In such a case, it is proper to show that reference character  $\beta_o$  has been used to illustrate both the output from the color controller (220) and the output from the second memory (250) in Fig. 2.

Applicants also point out that originally filed drawings are part of Applicants' original disclosure and, therefore, proper antecedent basis exists in Applicants' originally filed disclosure for the subject matter in issue.

Accordingly, these two objections under 37 CFR §1.84(p)(4) are improper and should be withdrawn.

The Office Action objects to the drawings under 37 CFR §1.83(a) because they do not show certain claimed features. These objections are respectfully traversed.

One claimed feature allegedly not shown in the drawings is "parameter vectors after processing the errors and the parameter vectors". The Office Action refers, in this regard, to Figs. 1 and 2 and claim 8, line 16. However, Applicants can choose where to show this feature in the drawings and have chosen to illustrate the claimed feature in Fig. 3.

Moreover, the Office Action recites the claimed feature out of context. Claim 8 actually recites "produces . . . a compensated description of errors and the parameter vectors

after processing the errors and the parameter vectors." This feature is disclosed in Fig. 3, including in steps S140 through S155.

The other claimed feature allegedly not shown in the drawings is the feature "spectrally matched color outputs" in claim 9. In context, claim 9 recites "processing the error vector and the parameter vectors to produce spectrally matched color objects." Applicants respectfully submit that this feature is shown in Fig. 2 in terms of output from second memory 250 through switch 260 to color marking device 230. The specification clearly discloses on page 14, lines 1-3, that "[W]hen colors are mapped with the new image parameter look-up table, as described above, other colors that are inside the gamut of the color marking device 230 that were not previously spectrally matched are now spectrally matched. The "as described above" refers to the operation of Fig. 2 as described, for example, on page 13, lines 13-32.

Accordingly, the features recited in the claims are shown in the drawings in terms of output from second memory 250 through switch 260 to color marking device 230.

Claims 1-8 and 9-27 are rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the invention. With respect to claims 1-8, the Office Action alleges that these claims are incomplete for omitting essential structural relationships of elements, such omission amounting to a gap between the necessary structural connections, citing MPEP §2172.01. With respect to claims 9-27, the Office Action alleges that these claims are incomplete for omitting essential steps, such omission amounting to a gap between the steps. This rejection is respectfully traversed.

With respect to the alleged failure to "claim the structural relationship for interconnecting or coupling of the color image source, the color marking device, a color controller, a memory, a first processing circuit, and a second processing circuit, an image

parameter mapping look-up table that translates the color image parameters to a device independent color space, and a device dependent color space, Applicants respectfully submit that there is no requirement in 35 USC §112, second paragraph, for such a structural relationship.

Claims are considered to be definite, as required by the second paragraph of 35 U.S.C. §112, when they define the metes and bounds of a claimed invention with a reasonable degree of precision and particularity. See In re Venezia, 530 F.2d 956, 958, 189 USPQ 149, 151 (CCPA 1976). In that case the court did not require Venezia's claims to recite its elements as being interconnected. In this Application, claim 1, for example, uses the transitional wording, "comprising" and only needs to recite those elements which distinguish the invention from the prior art. The definiteness of claim language is analyzed, not in a vacuum, but always in light of the teachings of the prior art and of the particular application disclosure as it would be interpreted by one possessing ordinary skill in the pertinent art, In re Moore, 439 F.2d 1232, 1235, 169 USPQ 236, 238 (CCPA 1971). Furthermore, the appellant may use functional language, alternative expressions, negative limitations, or any style of expression or format of claim which makes clear the boundaries of the subject matter for which protection is sought. See in this regard, In re Swinehart, 439 F.2d 210, 160 226 (CCPA 1971).

The recitation in the claims of the various recited elements is clear, and one of ordinary skill in the art can readily determine the metes and bounds of the invention without any further recitations.

The test for compliance with the second paragraph of 35 USC 112, as stated in Miles Lab., Inc. v. Shandon Inc., 997 F.2d 870, 875, 27 USPQ2d 1123, 1126 (Fed. Cir. 1993), cert. denied, 510 U.S. 1100 (1994) is whether one skilled in the art would understand the bounds

of the claims when read in light of the specification. If the claims, read in light of the specification, reasonably apprise those skilled in the art of the scope of the invention, Section 112 demands no more. See, also, In re Merat, 519 F.2d 1390, 1396, 186 USPQ 471, 476 (CCPA 1975), which stated that the question under Section 112, second paragraph is whether the claim language, when read by a person of ordinary skill in the art in light of the specification, describes the subject matter with sufficient precision that the bonds of the claimed subject matter are distinct. See, also, In re Warmerdam, 33 F3d 1354, 1361, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994).

The second paragraph of 35 USC 112 requires claims to be set out and circumscribe a particular area with a reasonable degree of precision and particularity, In re Johnson, 558 F.2d 1008, 1015, 194 USPQ 187, 193 (CCPA 1977).

All of Applicants' claims satisfy these requirements.

Moreover, the case cited in MPEP §2172.01 (on which this rejection is based) to require inclusion of essential structural cooperative relationships, In re Mayhew, 188 USPQ 356 (CCPA 1976), has been severely limited by the decisions of the Federal Circuit regarding the very similar Gentry Gallery case, cited below.

This Application is unlike the application in Gentry Gallery, Inc. v. Berkline Corp., 43 USPQ2d 1498 (Fed. Cir. 1998) in which the court's determination that the patent disclosure did not support a broad meaning for the disputed claim was premised on clear statements in the written description that described the location of a claim element - the "control means" - as "the only possible location" and that variations were "outside the stated purpose of the invention", Id. at 1503. The Federal Circuit subsequently held, in Johnson Worldwide Associates Inc. v., Zebco Corp., 50 USPQ2d 1607 (Fed. Cir. 1999) that Gentry Gallery considers the situation where the patent's disclosure makes it crystal clear that a particular

(i.e., narrow) understanding of a claim term is an "essential element of [the inventor's] invention." Applicants submit that this decision also limited the applicability of the In re Mayhew decision. In this regard, Applicants' disclosure never states that any particular feature is an essential element of the invention. Absent such an admission, there is no statutory basis to make the requirements set forth in these rejections under 35 USC §112. Accordingly, the rejection of claims 1-8 and 9-27 is improper and should be withdrawn.

To be complete, the other grounds of rejection under the caption of 35 USC 112, second paragraph will now be addressed.

With respect to claims 2 and 3, the Office Action alleges that the claims remain unclear as to the memory storage (250), (225), (125) location of the reflectance spectra, and of the two embodiments, which embodiment is claimed in claims 2 and 3.

In response to this rejection, Applicants note that claims 2 and 3 are original claims and, as such, are part of the original disclosure. It is well settled that the claims as filed are part of the specification, and may provide or contribute to compliance with Section 112. See Northern Telecom, Inc. v. Datapoint Corp., 908 F.2d 931, 938, 15 USPQ2d 1321, 1326 (Fed. Cir. 1990) (the original claims are part of the patent specification); In re Benno, 768 F.2d 1340, 1346, 226 USPQ 683, 686-87 (Fed. Cir. 1985); In re Frey, 166 F.2d 572, 575, 77 USPQ 116, 119 (CCPA 1948), cited in Hyatt v. Boone, 47 USPQ2d 1128, 1130 (Fed. Cir. 1998). As such, the question of which embodiment set forth in the specification claims 2 and 3 read on is irrelevant. Claims 2 and 3 are original claims and read on the originally filed disclosure. Their meaning is clear, so one of ordinary skill in the art can determine the scope of the claimed invention.

Moreover, the Office Action has provided no case law which holds that 35 USC §112, second paragraph requires that an Applicant explain what embodiment sent forth in the specification a claim reads on.

With respect to claims 6 and 7, Applicants have amended claims 6 and 7 to recite --the color reproduction system -- instead of "the color control system." Applicants thank the examiner for pointing out this issue. The Amendment does not narrow the scope of claims 6 or 7, in any manner.

With respect to claim 8, Applicants respectfully submit that the language "after processing the errors and the parameter vectors" in the last line of claim 8, refers to both "the reference parameter vector" and "the measured parameter vector" and that this is clear from a reading of claim 8, which recites "a first processing circuit that converts a reference color spectra into a reference parameter vector" and "a second processing circuit that converts the measured reflectance spectra into a measured parameter vector."

With respect to claim 9, Applicants respectfully submit that recitation of "reference parameter vector" in lines 4, 5 and 7 of claim 9, and recitation of "measured parameter vector" in lines 9 and 10 of claim 9 provide proper antecedent basis for "the parameter vectors" in the second last line of claim 9. Applicants submit that the meaning of this claim, an originally filed claim, is clear.

With respect to claims 9-27, the Office Action comments on the omission of steps S140-S155 and steps S140-S170, in Fig. 3 and asserts that these steps are required to be recited. Applicants respectfully disagree for the reasons stated above regarding the traversal of the similar rejection of claims 1-8. Moreover, Applicants never stated in their application that these steps were essential elements of their invention.

The Office Action also states that claims 10 and 19 are not supported in the specification. As pointed out above, there is no basis in 35 USC §112, second paragraph for such a rejection. Moreover, because claims 10 and 19 are originally filed claims, they are part of the originally filed specification and find proper support in the specification. See the case law cited above.

The Office Action also states that claims 24 and 25 are not supported in the specification. As pointed out above, there is no basis in 35 USC §112, second paragraph for such a rejection. Moreover, because claims 24 and 25 are originally filed claims, they are part of the originally filed specification and find proper support in the specification. See the case law cited above.

The Office Action also alleges that claims 1-27 do not represent the structural relationship of the color marking device, a color controller, memory, a first processing circuit, a second processing circuit, a color sensor as shown in Figs. 1-2, and as described in the specification. Applicants respectfully disagree with this allegation.

Applicants have not cited any authority for the proposition that claims have to represent the structural relationship shown in Figs 1 and 2, and Applicants are not aware of any such authority. Also, for reasons noted above, 35 USC §112, second paragraph's requirements are far different than as alleged in this Office Action.

Moreover, because each and every one of claims 1-27 are original claims and, as such, are part and parcel of the original specification, as explained in the case law cited above, claims 1-27 recites whatever relationship is in those claims as part of the specification.

Accordingly, Applicants respectfully submit that claims 1-27 fully comply with the requirements of 35 USC §112, second paragraph.

The Office Action rejects claims 8-10, 12, 14-16, 21 and 23-25 under 35 USC §102(b) as anticipated by U.S. Patent 5,664,072 to Ueda et al. (hereinafter, "Ueda"). This rejection is respectfully traversed.

A prior art reference anticipates the subject matter of a claim when that reference discloses every feature of the claimed invention, either explicitly or inherently. In re Schreiber, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997) and Hazani v. Int'l Trade Comm'n, 126 F.3d 1473, 1477, 44 USPQ2d 1358, 1361 (Fed Cir. 1997). While, of course, it is possible that it is inherent in the operation of the prior art device that a particular element operates as theorized by the examiner, inherence may not be established by probabilities or possibilities. In re Oelrich, 666 F.2d 578, 581, 212 USPQ 323, 326 (CCPA 1981) and In re Rijckaert, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993).

Ueda fails to disclose, explicitly or inherently, generation of reference color spectra, nor a first processing circuit that converts a reference color spectra (which is not disclosed as being generated) into a reference parameter vector. Ueda never once even mentions the word "vector" throughout its entire disclosure.

The Office Action improperly alleges that color correction device 211 of Ueda "accepts color input data from an input device (10) and corrects this data through a color correction portion (211b), and a mask storing portion (211a), which reads on "that converts a reference color spectra into a reference parameter vector."

The Office Action fails to provide any evidence of this assertion. It is nothing more than an unsupported conclusion without any reasoning or evidence presented to support it. As such, it denies Applicants both substantive and procedural due process to which they are entitled under the Administrative Procedures Act. See in this regard, In re Zurko, 119 S.Ct. 1816, 50 USPQ2d 1930 (1999), and In re Gartside, 53 USPQ2d 1769 (Fed. Cir. 2000).

In order to generate reference color spectra, Ueda would have to use a device that can generate reference color spectra - a spectrophotometer, for example. However, Ueda fails to disclose use of a spectrophotometer. Ueda simply fails to disclose generating reference color spectra. Moreover, the input color device disclosed in col. 20, lines 7-15 is already expressed in terms of trichromatic coefficients ( $a^*i$ ,  $b^*i$ ) and a tristimulus value ( $L^*i$ ). Thus, the input color data in Ueda is not given in terms of a reference color spectra. Nor is it given in terms of a "reference parameter color vector," as recited.

The Office Action actually points out that Ueda discloses using a colorimeter (216) to provide color information for color processing. However, Ueda never discloses that its "colorimeter" is the type of device that "measures reflectance spectra on the image," as recited. In fact, Ueda's invention is disclosed in terms of using a conventional image scanner to obtain a set of tristimulus values - see col. 1, lines 10-20. Applicants are not aware that conventional scanners measure reflectance spectra and the Office Action has not provided evidence that scanners necessarily measure reflectance spectra of an image that is scanned. Ueda's image scanners presumably obtain the tristimulus values of a scanned image using tristimulus colorimetry rather than by measuring reflectance spectra of the image, especially in view of the fact that Ueda never mentions measuring reflectance spectra of an image.

A spectrophotometer provides a wavelength by wavelength measurement of the (reflected and/or transmitted) light intensity of an image, i.e., the spectra of the image, whereas a colorimeter uses broadband filters to measure tristimulus values and uses a normalization procedure to produce trichromatic coefficients based on those tristimulus values. Ueda has no disclosure of a spectrophotometer, i.e., a device that measures spectra of an image.

Nor does Ueda disclose a color controller that converts the non-existent "reference parameter vector" to a "processed reference parameter vector," as recited.

There is simply no disclosure in Ueda of any of the seven positively recited steps in claim 8.

Accordingly, Ueda does not anticipate claim 8.

Similar comments apply to the features recited in independent method claim 9, which recites receiving a reference reflectance spectra; converting the reference reflectance spectra to a corresponding reference parameter vector; printing an image based on the converted reference parameter vector; measuring reflectance spectra of the image printed based on the converted reference parameter vector; converting the measured reflectance spectra to a corresponding measured parameter vector; comparing the reference parameter vector to the measured parameter vector to determine an error vector; and processing the error vector and the parameter vectors to produce spectrally matched color outputs.

Ueda does not anticipate these features of claim 9.

Nor does Ueda anticipate the features recited in claims 10, 12, 14-16, 21 and 23-25, which depend from claim 9, at least for the reasons that Ueda does not anticipate claim 9.

The Office Action rejects claims 1-3, 6 and 7 under 35 USC §103(a) as unpatentable over Ueda in view of U.S. Patent 5,8877,787 to Edge. This rejection is respectfully traversed.

In the first place, Ueda does not anticipate or render obvious the invention recited in independent claim 1. Ueda does not disclose or suggest a first processing circuit that converts a reference color spectra into a reference parameter vector, or a second processing circuit that converts a measured color spectra into a measured parameter vector, for the reasons stated above regarding the rejection of independent claims 8 and 9.

In the second place, Edge does not appear to provide these features missing from Ueda, and the Office Action does not allege that Edge provides these missing claimed features. Edge is only cited and applied for disclosing a color transformation LUT 20, which the Office Action asserts "reads on 'including a feed-forward lookup table.' " Applicants respectfully disagree. Edge's color transformation LUT 20 is not disclosed as a feed-forward lookup table. There is no "feed-forward" loop shown in Edge. In fact, as shown in fig. 1, color transformation LUT 20 receives data directly CV<sub>1</sub> from processor 14 and returns data directly CV<sub>2</sub> to processor 14. The Office Action fails to provide any evidentiary support for its conclusion that color transformation LUT 20 is a "feed-forward lookup table."

Accordingly, even if it were obvious to modify Ueda with Edge's color transformation LUT 20 (which Applicants contend it is not) the resulting reference combination would not render the claimed invention obvious because the reference combination would not have a "feed-forward look-up table," as recited. Furthermore, exactly how Edge's LUT would be used to modify Ueda is not indicated in the Office Action, and how it would work in the context of Ueda is not explained.

Additionally, the alleged motivation to modify Ueda in view of Edge is to "create an automatic device." Applicants do not see the need to make Ueda's device an "automatic device" because it appears to be as automatic as Edge's device. Moreover, the Office Action never explains what Edge's color transformation LUT 20 has to do with automating Edge's device or Ueda's device.

Accordingly, with respect to claim 1, the rejection is improper and should be withdrawn.

Claims 2, 3, 6 and 7 depend from claim 1 and are patentable over Ueda and Edge at least for the reasons that claim 1 is patentable over Ueda and Edge, for the reasons set forth above.

Accordingly, this rejection of claims 1-3, 6 and 7 is improper and should be withdrawn

The Office Action rejects claim 11 under 35 USC §103(a) as unpatentable over Ueda in view of Edge. This rejection is respectfully traversed.

Claim 11 depends from claim 9 and claim 9 is not anticipated by Ueda at least for the reasons set forth above.

Edge does not appear to provide the features missing from Ueda, as pointed out above, and the Office Action does not allege that Edge provides these missing claimed features. Edge is only cited and applied for disclosing color patches, which allegedly read on "converting the reference reflectance spectra", the patches possibly being some or all of the color patches formed during the reference setting mode, which allegedly read on "includes measuring a reflectance spectra of certain critical pixels of the image."

Applicants respectfully submit that Edge does not disclose measuring reflectance spectra of certain critical pixels of the image printed based on the processed reference parameter vector, which is the only image recited in claim 9, and the only image referred to in claim 11. Edge's color patches are simply not part of the image printed based on the processed reference parameter vector.

Furthermore, neither Ueda nor Edge identify "critical pixels of the image", as recited.

Thus, even if the references were properly combined (which they are not), the resulting reference combination would not render the claimed invention obvious.

Additionally, neither Ueda nor Edge disclose or suggest calibrating only colors within a specific color gamut, and that such colors are critical, the alleged motivation to combine these two references is based solely on improper hindsight reconstruction of the claimed invention, being based on a teaching found only in Applicants' disclosure and not in either applied reference.

Accordingly this rejection of claim 11 is improper and should be withdrawn.

The Office Action rejects claims 4 and 5 under 35 USC §103(a) as unpatentable over Ueda in view of U.S. patent 6,046,820 to Konishi. This rejection is respectfully traversed.

In the first place, Ueda does not anticipate or render obvious the invention recited in independent claim 1. Ueda does not disclose or suggest a first processing circuit that converts a reference color spectra into a reference parameter vector, or a second processing circuit that converts a measured color spectra into a measured parameter vector, for the reasons stated above regarding the rejection of independent claims 8 and 9.

In the second place, Konishi does not appear to provide these features missing from Ueda, and the Office Action does not allege that Konishi provides these missing claimed features.

The Office Action improperly concludes that Konishi's printer engine 22 and sensor for measuring density 22a reads on "the color sensor is mounted on an output paper path of the color marking device."

However, Konishi merely discloses that "formation of the sample image and measurement of density in the printer 2 may be performed by actually forming the sample image on the recording medium (e.g., recording paper) and measuring the density of this image. In an electrophotographic printer, for example, the sample image may be formed on a

photosensitive drum and the density of the sample image on the photosensitive drum may be measured." See col. 4, lines 31-40.

Konishi never discloses where he measures the sample image other than in the electrophotographic printer embodiment where the image is measured "on the photosensitive drum." There is no disclosure of the claimed invention of claims 4, wherein the output sensor is mounted on in an output paper path of the color marking device, or of the claimed invention of claim 5, wherein the color sensor is mounted within an output tray of the color marking device.

Therefore, even if these references were properly combined (which they are not), they would not render the claimed invention obvious.

The alleged motivation to combine these references is to "acquire the actual density from the printer (2), to create the grayscale correction table (16), given the express suggestion by Konishi (col. 4, lines 28-31)." However, Ueda does not disclose a need for grayscale calibration. Absent a need for such a feature, and of evidence by the Office that such a need exists in Ueda, the only basis for the alleged motivation is speculation, which is an improper basis for a rejection.

Accordingly, this rejection of claims 4 and 5 is improper and should be withdrawn.

The Office Action rejects claims 13, 17, 18, 22, 26 and 27 under 35 USC §103(a) as unpatentable over Ueda in view of U.S. Patent 6,185,004 to Lin. This rejection is respectfully traversed.

Claims 13, 17, 18, 22, 26 and 27 depend from claim 9 and claim 9 is not anticipated by Ueda at least for the reasons set forth above. The Office Action admits that Ueda does not disclose that "converting the reference reflectance spectra includes converting the reference spectra through nonlinear transformation."

The Office Action indicates that Lin discloses, in Figs. 3a and 3b, a non-linear transformation between color spaces and indicates that in view of this it would be obvious to modify the method taught by Ueda, with a non-linear transformation between color spaces, as taught by Lin.

What is recited in claim 9, from which claims 13, 17, 18, 22, 26 and 27 depend, is "converting the measured reflectance spectra to a corresponding measured parameter vector." However, this recited step does not involve converting from one color space to another color space. The Office Action has presented no evidence that a non-linear transformation used in Lin to convert color data from one color space to another color space is relevant to the claimed invention, which involves "converting the measured reflectance spectra to a corresponding measured parameter vector."

The alleged motivation to modify Ueda in view of Lin is also improper because even if transformation of data from one color space to another color space using a non-linear transformation were an "inherent property", which the citation of one reference using it does not establish, the relevance of this to "converting the measured reflectance spectra to a corresponding measured parameter vector" has not been established nor is it clear from either applied reference.

Accordingly, this rejection of claims 13, 17, 18, 22, 26 and 27 is improper and should be withdrawn.

The Office Action rejects claims 19 and 20 under 35 USC §103(a) as unpatentable over Ueda in view of U.S. patent 6,344,902 to Duke et al. (hereinafter, "duke"). This rejection is respectfully traversed.

Claims 19 and 20 depend from claim 9 and claim 9 is not anticipated by Ueda at least for the reasons set forth above. The Office Action admits that Ueda does not disclose

"converting the reference reflectance spectra . . . includes storing the measured reflectance in a look-up table," as recited in claim 19.

The Office Action asserts that Duke "inherently" teaches this feature because Duke's measurement devices (200), (400), (500), or the images in the output devices (600), (700), and (800), wherein the image processing devices (200), (300), (400), and (500), contains images storage devices, (col. 5, lines 11-15; col. 7, lines 39-43).

With respect to claim 20, Duke is said to inherently teach claim 20,s features as evidence by col. 11, lines 61-65.

The Office Action then lumps both of these claims together in the sense that it alleges that one would have been motivated to use Duke's method to perform different color transformations for each output device given the express suggestion of Duke in col. 5, lines 50-51.

With respect to claim 19, Duke does not disclose a look-up table. Nor does Duke disclose measuring reflectance spectra nor storing measured reflectance spectra in a look-up table. Thus, even if Duke were properly combinable with Ueda (which it is not), the combination would not result in the claimed invention.

With respect to claim 20, Duke does not disclose measuring reflectance spectra nor converting measured reflectance spectra of certain critical pixels of the image. The fact that Duke may modify subsequent portions of the representation of the assembled image - see col. 11, lines 40+, contains no mention of, and, therefore, has nothing to do with measuring reflected spectra of certain critical pixels of the image. Thus, even if Duke were properly combinable with Ueda (which it is not), the combination would not result in the claimed invention.

Additionally, the alleged motivation for modifying Ueda in view of Duke, i.e., the allegedly express suggestion in col. 5, lines 50-51, which states that if there are more than three output devices, the rendering device 500 may have to perform a different transformation for each output device, simply does not apply to Ueda. Ueda does not have multiple output devices of different types, e.g., display and/or marking devices that require different transformations of a digital image to a presentation image. The Office Action fails to explain why one of ordinary skill in the art would look to Duke, which deals with generating presentation images for a distributed digital image processing system, to modify Ueda, which simply deals with a simple color printer.

Accordingly, the rejection of claims 19 and 20 is improper and should be withdrawn.

For the foregoing reasons, Applicants respectfully submit that this Application is in condition for allowance, and Applicants respectfully request that the Examiner acknowledge that the Information Disclosure statement filed on August 4, 2003 fully complies, on a prima facie basis with the requirements of 37 CFR §§1.97, 1.98 and MPEP §609, that this compliance was achieved on August 4, 2003, initial all references listed on the PTO-1449 filed on August 4, 2003, and request that this Application be passed to issue.

Should the Examiner believe that anything further is needed to place this Application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below.

Respectfully submitted,



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Robert J. Webster  
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JAO:RJW/sxb

Attachments:

Copy of U.S. Patent Application Serial No. 09/487,587  
Copy of Fig. 2 of this Application  
Copy of August 4, 2003 PTO mailroom receipt  
Form PTO-1449

Date: December 3, 2003

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